Custom Services International
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Dockets Management Branch
Division of Management Systems and Policy
Office of Human Resources and Management Services
Food and Drug Administration
5630 Fishers Lane, Room 1061, (HFA-305)
Rockville, MD 20852.

Gentlemen:

Reference : 98N-0313

This letter is in response to the specific request for information contained in the above referenced Federal Register Notice. I have provided the answers to the request for comment in the order they were presented.

1. Timeframe of implementation. The Agency is proposing a two year implementation effective date. Based on the QSR, for manufacturers who have not had to comply with Class II requirements for other reasons, it will take at least one year to get a working set of procedures in place and then a period of time to correct errors. Enforcement of record guidelines would have to be established such that records are not required at the level of the QSR prior to the implementation of the corporate procedure, and inspections should be conducted with the consideration of the date that these regulations become effective. For those firms, like our, which manufacture outside the U.S. implementation takes longer. Once we develop procedures, they have to be translated into original language (in our case Chinese) and then carefully gone over to assure that the translation is reflective of the requirement of the regulation. This process can take the full two years.

2. Limitation to 120 mg. of powder. The data that has been presented to the ASTM indicates that this level of powder is not currently possible, and cannot be achieved for *at least 2 years*. As the application of powder is made in a slurry, the application of powder to any discrete glove in the slurry cannot be directly controlled. The level of powder is generally dependent on the production process, and with the design control requirements of the QSR, testing and validating changes in process must follow a controlled path. While design control will produce safer devices in the long run, in the short run it does significantly increase development time. In evaluating the data available, it does not appear this level of powder can be achieved in a two year implementation period. It can be scaled down to, but it more probably will take three years to reach this level and significant investment in capital and research and development to develop processes which control the level of powder as proposed by the Agency.

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3111 WEST POST ROAD • LAS VEGAS, NV 89118
702-897-1789 • FAX 702-897-7416

3. Specific ingredients of glove powder. For the most part, the glove powder used by manufacturers is USP absorbable dusting powder. This should be clearly stated on the label. If other ingredients (specific things added to USP powder) then these items should be labeled. For gloves used in food service this is especially important as the powder becomes a food additive.

4. 2 mg powder limit for powder free. The level proposed has already been addressed by the ASTM standard for both surgeon's and examination gloves. By the time of implementation of this proposal, the level of powder is scaling back from 4 mg (current standard) to 2 mg (2001 standard). This would be consistent with the proposed implementation by the Agency. As for the effect on shelf life, chlorination is the cause of a decrease in shelf life in comparison to existing technology. Alternative methods of manufacture which do not use chlorination are just being developed. This limit per se is not a factor in the decrease shelf life (powder has not been demonstrated to add to shelf life). The chlorination process which is used by most manufacturers is the cause.

5. Powder free requirement. As a powder free manufacturer, we would not be opposed to this requirement, however, the market is already shifting to this. The availability of powder free gloves has increased and are often unsold because of price. It is important to point out that the cost of manufacturing powder gloves is higher because chlorination does increase failures. Such a requirement would allow users who prefer powder free (patient examination users) to have what they prefer, rather than the institution buying strictly on cost (powdered are less expensive). Surgeons however, continue to express a desire for powdered gloves and will physically add powder themselves.

6. Powder restrictions. If the FDA determines that restrictions should be placed on powder, it should be banned. Limitations on powder creates a legal void which will cause harm to manufacturers and users. To say powder is safe (allow it to be used in a medical device essentially makes this statement) but should be controlled (it therefore is not inert) will confuse both patients and users. Powder in excess is harmful. For those who are allergic to latex, powder limits their ability to work. It would be better to phase in the elimination of powder.

7. Protein Limit. While it is important to control allergenic proteins, all protein is more nebulous. Many manufacturers (our company being one) add protein to replace natural proteins that are removed in order to stabilize the material and assure shelf life. It is misleading to say that protein is limited to 1200 μg, because the Lowry test can only measure soluble proteins. Some of the protein is bound and cannot be captured by the Lowry test. Given the variability of the test, and the interference that non-protein elements can cause, the wording of how compliance is to measured becomes crucial. ASTM has proposed that the surface area be considered for the measurement of protein because this is not design restrictive. The public has been seeing a measurement that is based on dm^2 and this is a better measurement to use. To the extent that an absolute limit is to be proposed, at the latex film is homogeneous, it is better to have a limit expressed in surface area, because the absolute limitation regardless of size would allow examination gloves with protein levels significantly higher than those in the market currently.

8. Alternative Methods of Protein Measurement. The ELISA working group has proposed an alternative method for protein measurement which is based on the allergenistic quality of the protein. Foreign body reactions are more related to the glove powder than they are proteins. Proteins cause allergic reactions. Glove powder, provided it is controlled and limited will control this process. If foreign body reaction is the goal of the regulation, powder should be phased out. This would offer the most effective control.

9. Required or recommended. As a small manufacturer, we always prefer that requirements be enforceable against all for the even playing field. As such, we would prefer they be requirements, not recommendations. We would suggest that an S2 inspection with an AQL of 4.0 be established. As the precision of the test improves, tightening of the AQL may be possible. Currently, the Lowry test is too imprecise for a tighter AQL.

10. Shelf Life. The Agency's requirements for both protein and powder limits will affect the Company's ability to determine shelf life. As the variables of the process have been changed, the method of shelf life determination by any method will have to be revalidated. Additionally, even the real time data the Company has would be useless because the protein limits would make a significant change in the latex film, and most probably directly affect the shelf life. As no validated method for accelerated shelf life is generally available, and the methods we have are tied to the film as it is, shelf life requirements will be difficult to implement in less than 3 years because no data is available. ASTM has formed a working group to address this issue, in which this Company is actively involved, and as such, until a validated method can be determined, a delay in the enforcement of this requirement is respectfully requested.

11. Special air handling. There is a study in the literature that examined this question and found air handling did not significantly change powder levels. Until a proposal for such a regulation could be examined, comments would be premature.

12. Exemptions and restrictions. As a small business, we would request that no exemptions or restrictions be granted. It is a significant cost for small business to comply, and it is a cost that should be borne by all equally.

The cost estimations made by the agency are significantly understated. The cost to develop entirely new processes, new labeling, new regulatory requirements and standard operating procedures will cost this firm at least $500,000. It will take time to develop a more realistic estimates as information from the Agency study to be presented as ASTM in December and the impact of the design changes cannot be currently calculated.

Sincerely,
CUSTOM SERVICE INTERNATIONAL, INC.

Lillie C. Thomas, M.S.
Vice President of Quality Assurance and Regulatory Compliance